



# ***Master Control Room Video Display Interfaces #105***

*William Berg  
Diagnostics Group  
APS Operations Division*

## ***Argonne National Laboratory***



A U.S. Department of Energy  
Office of Science Laboratory  
Operated by The University of Chicago



## **Project: Main Ctrl Room - Video Display Interfaces**

**Objective:** Design and implement a MCR video display interface system to complement the APS site wide "real-time" video infrastructure that is currently in progress. Proposing an elegant and ergonomic integration of three video display stations based on 30" screens, PC streaming receivers/digitizers, and various standard broadcast monitors.

### **Background Information:**

- **New Initiative**
- **Single Year Funding**
- **High Priority**

**Justification:** The display stations proposed here would properly instrument the MCR with sufficient display capabilities to efficiently use and assimilate existing and future video based data analysis systems, alarms, and streaming resources.

**Consequence:** Will result in increased user downtime from lack of machine fault detection and access to beam analysis systems.

**Cost:**            **FY05 Cost Noneffort: \$126k**  
                      **FY05 Total w/effort: \$189k**

## ***MCR Video Display Interfaces***

---

- **Final Component of the “Real Time” Video Upgrade.**
- **64 Independent Uninterruptible Video Channels.**
- **One Hundred Video Signals from APS Machines.**
- **Implementation of the Frame Grabber Pool Expands our On Line Analysis and Machine Monitoring Capabilities.**
- **Work Stations Do Not Support Full Size/Res Streaming Video.**
- **Enhances Perceived Appearance of our Master Control Room.**



# ***MCR Video Display Interface***

---

## **Existing Master Control Room Video Monitors**



# APS MCR

Each 30-inch display replaces two existing Sun monitors, but retains the equivalent computer desktop workspace.

1. Alarm Handling
2. Streaming Video
3. Scope Traces
4. On-line Analysis
5. Camera Images
6. Calibration Overlays

Video Display Station

Existing Unix Workstation

Existing Unix Workstation

30-inch HD  
Flat Display

- Linux/G5
1. Soft Digitizer
  2. Streaming Receiver

